DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	KINSMAN POND	Lake Area (ha):	1.01
Town:	LINCOLN	Maximum depth (m):	2.1
County:	Grafton	Mean depth (m):	1.1
River Basin:	Merrimack	Volume (m^3):	10500
Latitude:	44°08'10" N	Relative depth:	1.9
Longitude:	71°44'00" W	Shore configuration:	2.25
Elevation (ft):	3790	Areal water load (m/yr):	86.72
Shore length (m):	800	Flushing rate (yr^{-1}):	82.00
Watershed area (ha):	98.4	P retention coeff.:	0.25
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:			8 September 1994
DOM. PHYTOPLANKTON (% TOTAL)	#1		SCHROEDERIA 45%
	#2		DICTYOSPHAERIUM 30%
	#3		COSMARIUM 20%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			17.83
DOM. ZOOPLANKTON (% TOTAL)	#1		NAUPLIUS LARVA 65%
	#2		KERATELLA 27%
	#3		
ROTIFERS/LITER			16
MICROCRUSTACEA/LITER			35
ZOOPLANKTON ABUNDANCE (#/L)			51
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			0.4
BOTTOM DISSOLVED OXYGEN (mg/L)			11.8
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : None

CHEMICAL: **Lake: KINSMAN POND**
Town: LINCOLN

			8 September 1994		
DEPTH (m)			1.0		
pH (units)			4.5		
A.N.C. (Alkalinity)			-1.9		
NITRATE NITROGEN			0.12		
TOTAL KJELDAHL NITROGEN			< 0.10		
TOTAL PHOSPHORUS			0.077		
CONDUCTIVITY (μmhos/cm)			29.5		
APPARENT COLOR (cpu)			150		
MAGNESIUM			0.22		
CALCIUM			1.0		
SODIUM			0.5		
POTASSIUM			0.16		
CHLORIDE			< 2		
SULFATE			4		
TN : TP					
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	6	1	3	10	Eutro.

COMMENTS:

1. This is a shallow remote mountain pond, located in the evening shadow of North Kinsman Mountain within the White Mountain National Forest.

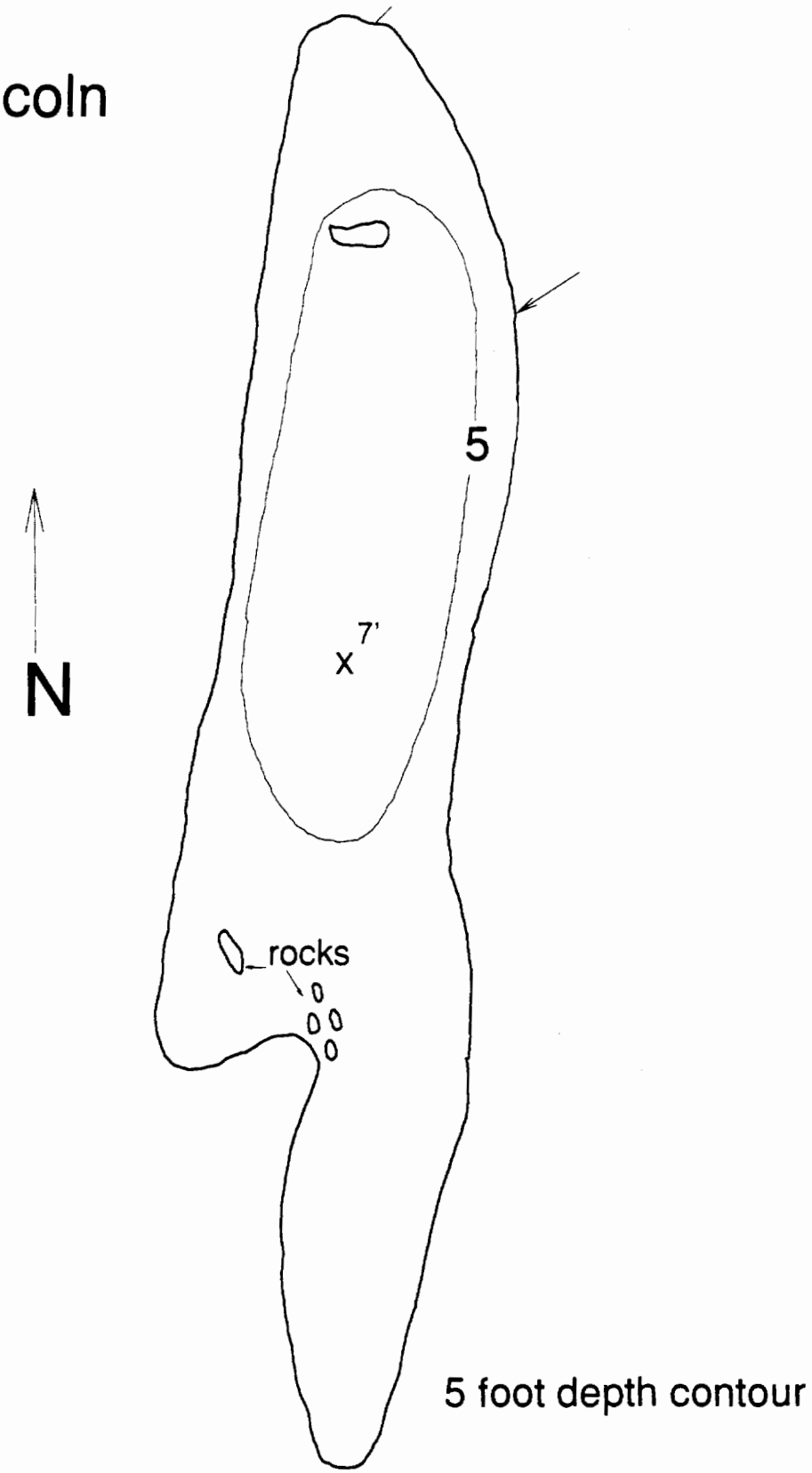
2. Kinsman Pond was not sampled during the winter because of icy, treacherous trail conditions.

3. This is a darkly colored acid pond with negative buffering capacity (ANC). This condition is confirmed by previous sampling by helicopter. Somewhat unusual for a remote mountain pond were the high levels of phosphorus and the relatively high levels of algae.

4. The water appeared "murky", probably due to both algal cells and decaying organic detritus (organic acids). The poor water clarity (barely more than 1 foot) was caused by both the suspended matter (algae & detritus) and the dark color.

Kinsman Pond

Lincoln



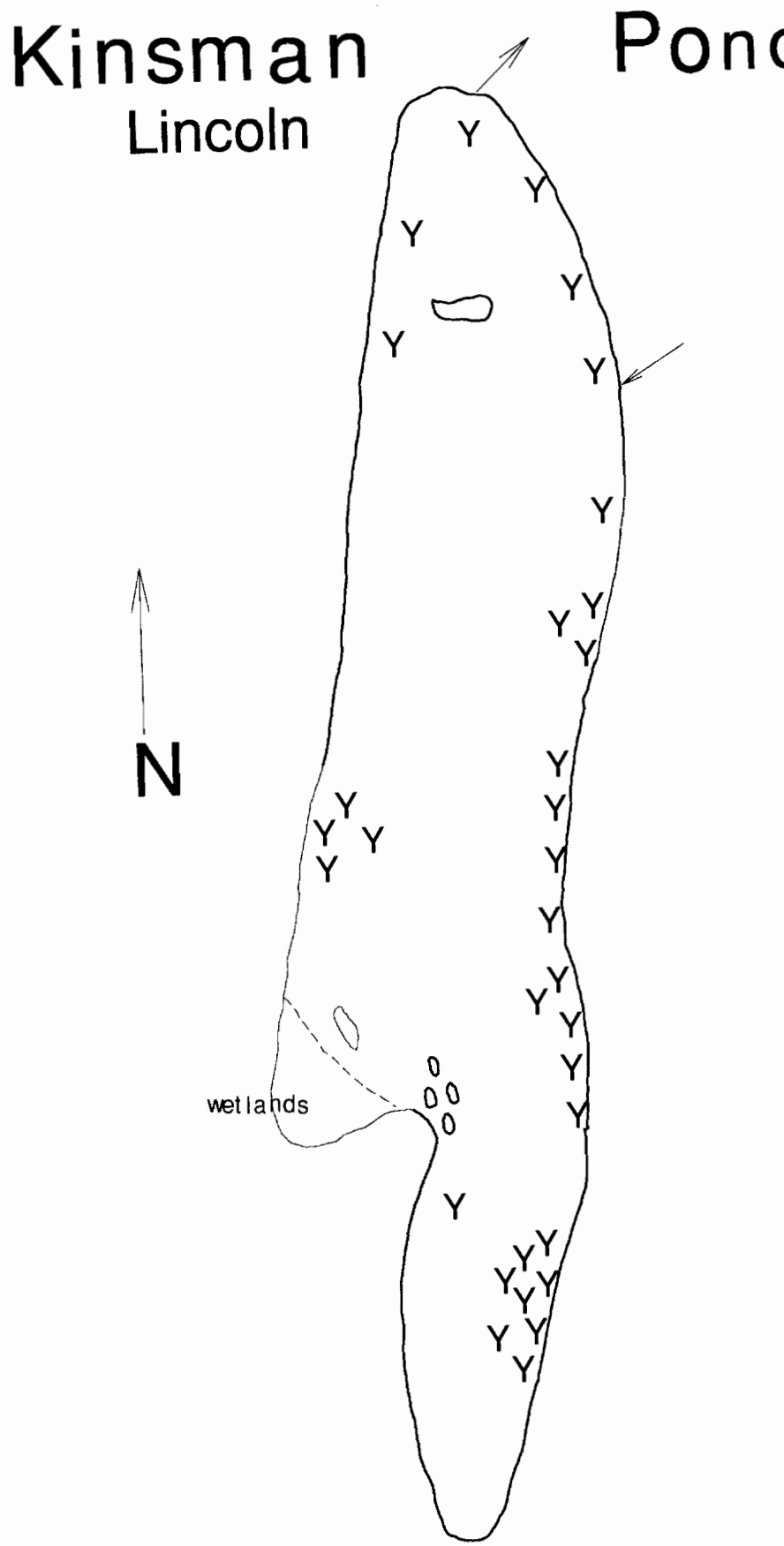
FIELD DATA SHEET

LAKE: KINSMAN POND TOWN: LINCOLN
DATE: 09/08/94 WEATHER: SUNNY & WARM

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	9.0	12.0	104 %
	0.5	8.9	12.0	101 %
	1.0	8.0	11.9	98 %
	1.5	8.0	11.5	96 %
	2.0	7.9	11.8	95 %

SECCHI DISK (m): 0.4 COMMENTS:
BOTTOM DEPTH (m): 2.1
TIME:

*Dissolved oxygen values are in mg/L



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AQUATIC PLANT SURVEY

LAKE: KINSMAN POND TOWN: LINCOLN DATE: 09/08/94

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
Y	Nuphar	Yellow water lily	Scattered

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. Very shallow pond; yellow lilies were scattered around the pond. Numerous rocks were present and the southwest cove was a wetland.